The Virginia Commercial Vehicle Information Systems and Networks (CVISN) Prototype Project Plan

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Making Intelligent Use of ITS/CVO

DRAFT - June 25, 1996

Note: This is a working document. It has NOT been approved by the Virginia CVO Working Group. Until it has been reviewed and approved, this document should only be used for information purposes and not for decision making.

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Executive Summary

This document constitutes the project plan for the **Virginia Commercial Vehicle Information Systems and Networks Prototype,** a project undertaken by the Commonwealth of Virginia in partnership with the Federal Highway Administration, the State of Maryland, and numerous other organizations involved in the Commercial Vehicle Operations aspects of Intelligent Transportation Systems.

This document pulls together in one place the project objectives, activities, roles and responsibilities agreed to by the various project partners. This document will evolve as the project proceeds. At the conclusion of this project, this document will serve as a model for how to plan for subsequent deployment activities related to Intelligent Transportation Systems/Commercial Vehicle Operations (ITS/CVO).

Appendix A contains a glossary of terms and acronyms used throughout this document.

Appendix B contains a copy of the letters and agreements between project partners pertinent to this project.

Project Objectives

The letters and **agreements** included in Appendix B define the scope for the CVISN Prototype as including:

- distribution of safety information to computers at the roadside
- electronic collection of inspection data from the roadside
- electronic application for credentials by carriers
- interfacing of State systems to the International Registration Plan (IRP) Clearinghouse
- interfacing of State systems to the International Fuel Tax Agreement (IFTA) Clearinghouse
- performing electronic clearance

The primary objective of the project is to test the technical feasibility of providing the above services through an integrated collection of commercial vehicle information systems and networks. The partners in this project have set an ambitious schedule - to showcase two or more of these services in September 1996. In addition to the showcase demonstrations, the lessons learned throughout this project will influence future related efforts. If successful, this project will serve as a model for deployment in several other States.

Project Activities

The following sections provide information on the objective and approach for each project activity. Most activities have separate informal plans providing the details necessary to meet the objectives of the activity. Each section includes the key personnel leading the activity and the capabilities targeted to be available for each of the three showcases.

1. SHOWCASES

The CVISN Prototype includes three showcases to demonstrate to key decision makers the improved processes and technology under development. Showcases will provide an opportunity for the public and private partners directly involved in the prototype to report on the benefits they have realized, the costs incurred, and then- plans for future activities. Showcases will include live demonstrations when appropriate. Showcases will include adequate time to gather immediate feedback from all attendees and a encourage continued feedback as the project progresses.

1.1 Showcase #l

Showcase #l, scheduled for September 1996, will include the following elements described in subsequent sections:

- Virginia Commercial Vehicle Information Exchange. Demonstrate the ability to store and merge credential information with safety information and distribute to the roadside.
- Pen-based inspections and SAFER Data Mailbox connection
- Virginia Credentialling Interface: Demonstrate the ability for carrier to submit the following applications electronically to the DMV Credentialing Interface. Credentials will be processed by DMV Motor Carrier staff or VDOT staff (oversize/overweight) on the appropriate application system (i.e., Intra-State system, Oversize/Overweight system (VDOT), VISTA/TS and VISTA/RS) and mailed/Faxed to carrier:
    - IRP registration (original, renewal, and supplements)
    - Virginia Motor Fuel Road Tax Registration (original, renewal, and supplements)
    - IFTA registration (original, renewal, and supplements)
    - Intra-State registration
    - Trip permits (IRP/Fuel Tax for Virginia)
    - Oversize/Overweight permits (VDOT)
- Virginia Liquidated Damages: Demostrate the ability for VDOT personnel to enter overweight citations from the fixed sites (scales) to the DMV mainframe system
- Virginia connection to SAFER
- Electronic Clearance at Stephens City, Virginia including connection to Virginia CVIE, license plate reader, and transponder reader using JHU/APL ROVER in 35 mph sorter lane. No integration with operational system.

1.2 Showcase #2

Showcase #2, scheduled for March 1997, will include the following additional elements described in subsequent sections:

- Virginia Credentialing Interface. Demonstrate the ability for the DMV Credentialing Interface to receive and process applications electronically on the appropriate applications system. Credentials will be processed electronically (i.e., Intra-State system, Oversize/Overweight system (VDOT), VISTA/TS and VISTA/RS). Credentials will be produced at DMV and mailed/Faxed to carrier.
    - IRP registration (original, renewal, and supplements)
    - Virginia Motor Fuel Road Tax Registration (original, renewal, and supplements)
    - IFTA registration (original, renewal, and supplements)
    - Intra-State registration
    - Oversize/Overweight permits (VDOT)
- Electronic filing of road tax reports for Virginia carriers. Demonstrate the ability for the carrier to submit electronic filings of road tax reports (IFTA and Virginia Motor Fuel Road Tax).
- Virginia connection to IRP Clearinghouse.
- Roving Verification (ROVER) Van at the Route 522 Bypass including connections to the Virginia Commercial Vehicle Information Exchange (CVIE), license plate reader, transponder reader, and portable WIM.
- Roving Verification (ROVER) Van Screening using information provided by the Commercial Vehicle Information Exchange (CVIE) using license plate readers, transponder readers, and integration with a portable WIM system at a site TBD. The Virginia "ROVER' system will be deployed for this showcase. Trend analysis data will be collected and reported at that site. Inspection selection using ISS. Support for electronic collection of inspection information

1.3 Showcase #3

Showcase #3, scheduled for July 1997, will include the following additional elements described in subsequent sections:

- Virginia Credentialing Interface. Demonstrate the ability for the DMV Credentialing Interface to receive and process applications electronically and return credentials electronically for printing at the carrier sites.:
    - IRP registration (original, renewal, and supplements)
    - Virginia Motor Fuel Road Tax Registration (original, renewal, and supplements)
    - IFTA registration (original, renewal, and supplements)
    - Intra-State registration
    - Oversize/Overweight permits (VDOT)
- Electronic filing of road tax reports for Virginia carriers. Demonstrate the ability for the Credentialing Interface to accept and process road tax reports electronically (i.e., electronically update VISTA/ITS)
- Virginia connection to IFTA Clearinghouse.
- Screening at a remote location at mainline speeds using the Virginia "ROVER".
- Screening integrated with an existing weigh station facility (Stephens City and *other* TBD) using license plate readers and transponder readers, integration with sorter lane WIM/AVC, and using information provided by the Commercial Vehicle Information Exchange. Inspection selection using ISS. Support for electronic collection of inspection information
- Screening from a moving or stationary patrol car using license plate readers and transponder readers and using information provided by the Commercial Vehicle Information Exchange. Inspection selection using ISS. Support for electronic collection of inspection information.

2. SAFETY INFORMATION

2.1 Commercial Vehicle Information Exchange

Objective

Provide a means for information about carriers, vehicles, and drivers operating in Virginia to get from the various authoritative sources within and outside the state to where it is needed within **and** outside the state. Capture credential snapshot data to be forwarded to the roadside and SAFER.

Key Personnel

Ken Jennings, VDOT; Judy Vesely, DMV Technical Staff, DMV; Lt. Herb Bridges, Virginia State Police: Brenda Clyde, APL

Target Date

Showcase 1: Store carrier, vehicle, and driver snapshots. Receive and assemble snapshot information from State systems **and** Interim SAFER. Provide updated snapshots to the Roving Verification Van and to ASPEN which supports electronic collection of inspection data for the Virginia State Police. Provide snapshot information to Interim SAFER.

Showcase 2: Receive and assemble snapshot information from modified State systems and SAFER.

Showcase 3: Provide updated snapshots to fixed sites.

Description

Carriers operating on Virginia's highways fall into one of three categories: (a) carriers based in Virginia who never travel outside Virginia; (b) carriers based in Virginia who travel to other States; and, (c) carriers based in other States. The same statement can be made for vehicles and drivers. Information about these carriers, vehicles, and drivers resides in a number of authoritative source systems, some within the State and others outside the State. This information needs to get from these various sources to where it is needed within the State.

This activity entails developing a system or systems to facilitate the exchange of safety information, including, but not limited to

- assembling information from various authoritative sources within and outside Virginia for forwarding to Virginia inspection sites to support the use of pen-based inspection systems
- assembling information from various authoritative sources within Virginia for forwarding to SAFER for subsequent delivery to other States
- assembling information from various authoritative sources within Virginia in response to requests from authorized non-government requesters (e.g., carriers and insurance agencies)

This approach relieves the State of establishing separate connections from each and every requester to each and every authoritative source. For example, if there are 30 inspection sites and 5 sources of carrier, vehicle or driver safety information, without this system there would be 150 connection paths. With this system there are 35. This approach also provides a buffer between external requesters and the authoritative sources, thereby adding a measure of additional security and reducing the extent of the changes needed to the authoritative source systems.

This approach relieves the State of establishing separate connections from each and every requester to each and every authoritative source. For example, if there are 30 inspection sites and 5 sources of carrier, vehicle or driver safety information, without this system there would be 150 connection paths. With this system there are 35. This approach also provides a buffer between external requesters and the authoritative sources, thereby adding a measure of additional security and reducing the extent of the changes needed to the authoritative source systems.

2.2 Electronic Collection of Inspection Data

Objective

Provide pen-based computers using the ASPEN software to Virginia State Police personnel to allow on-line retrieval of safety status information and entry of inspection data. Forward inspections to SAFETYNET through the SAFER Data Mailbox.

Key Personnel

Lt. Herb Bridges, Virginia State Police; Brenda Clyde, APL

Target Dates

Showcase 1: Four Pen-based Inspection Systems linked to Interim SAFER using land-based phone lines.

Showcase 2: Additional Pen-based Inspection Systems linked to the production SAFER system, some with the ability to support cellular phone lines.

Showcase 3: Additional Pen-based Inspection Systems.

Description

The FHWA has developed pen-based computer software and communications to support the conduct of roadside driver/vehicle inspections. This system, called ASPEN, is improving the accuracy of inspection information and will vastly speed up the availability of inspection data electronically to users.

Virginia is one of the original pen-based inspection states and currently has four units. Virginia is ordering an additional 15-20 pen-based systems. They are expected to be available to support (date) implementation.

The CVISN Prototype Project will use the new pen-based ASPEN systems. It will enhance them with an on-line link to the SAFER system, enabling on-line submission of inspection reports to the SAFER Data Mailbox and on-line queries. In particular, this will support the ability to instantly notify other enforcement officials in Virginia and Maryland about vehicles and drivers being placed out-of-service or being removed from an out-of-service condition.

2.3 Connection to the SAFER Data Mailbox

Objective

Provide a means for information about vehicle or driver inspections to get from the inspection site to other sites within and outside the State.

Key Personnel

Lt. Herb Bridges, Virginia State Police: Brenda Clyde, APL

Target Date

Showcase 1: Connection of VSP Pen-based Inspection Systems to Interim SAFER using land-based phone lines.

Showcase 2: Connection of additional Pen-based Inspection Systems to the production SAFER **system,** some with the ability to support cellular phone lines.

Showcase 3: Connection of additional Pen-based Inspection Systems.

Description

This activity will build on the systems supporting getting routine inspection results from the inspection site to **where** it is needed, and getting information downloaded to the inspection sites, by adding the capability for the inspector to specify that **the** information should be sent, to other sites at a high priority because the vehicle and/or the driver were placed out-of-service. For example, this will allow an inspector at the Dumfries site in Virginia to alert the I-95/1-495 site in Maryland, the MdTAP site at Perryville, and any roving crews operating in the area. Though the probability of a driver choosing to violate an out-of-service order is low, the fact that this information is being shared should serve as an added deterrence against a driver leaving the Dumfries site before correcting the situation that led to the out-of-service order.

2.4 Safety and Fitness Electronic Records (SAFER) System

Objective

Provide a means for information about vehicle or driver inspections to be uploaded to State SAFETYNET sites and for carrier, driver, and vehicle snapshot information to be sent to and from State CV Information Exchanges.

Key Personnel

Lt. Herb Bridges, Virginia State Police; Brenda Clyde and Paul North, APL

Target Date

Showcase #1: Support for inspection upload and carrier snapshot provided by Interim SAFER.

Showcase #2: Support for driver and vehicle snapshot provided by beta release of production SAFER.

Description

This activity entails connecting Maryland and Virginia systems to SAFER. Initial capabilities will include uploading inspection data from pen-based inspection systems to Interim SAFER via the SAFER Data Mailbox and providing carrier snapshots in response to queries from pen-based inspection systems. Additional capabilities will include providing bulk downloads of carrier, vehicle, and driver snapshots: responding to queries for driver and vehicle snapshots; supporting out-of-service alerts; and . . .

3. ELECTRONIC CREDENTIALS

3.1 Carrier Automated Transactions

Objective

Demonstrate the electronic credential application capabilities that will eventually be integrated into multiple fleet management applications by multiple vendors.

Key Personnel

Judy Vesely and Jerry Fern, DMV; Dale Bennett, VTA; Ken Jennings, Virginia DOT; Jude Nagurney, RSIS; Maggie VanVliet, APL

Target Date

Showcase #1: Electronic application for following Virginia credentials (actual credentials to be mailed or faxed to applicant):

- IRP registration (original, renewal, and supplements)
- Virginia Motor Fuel Road Tax Registration (original, renewal, and supplements)
- IFTA registration (original, renewal, and supplements)
- Intra-State registration
- Trip permits (IRP/Fuel Tax for Virginia)
- Oversize/Overweight permits (VDOT and MD/SHA)

Showcase #2: Add capability to submit electronic filings of road tax reports (IFTA and Virginia Motor Fuel Road Tax) for Virginia carriers. Add capability to support electronic funds transfer.

Showcase #3: Add capability to print credentials at the applicant's site.

Description

Electronic credentialing begins with the electronic application process. The CVISN Prototype will use at least two separate packages to demonstrate the process of applying for credentials using draft X. 12 EDI transactions as defined in the CVISN Architecture. Initially, we will use the Carrier Automated Transaction (CAT) system under development by RSIS for the Mid-West One Stop Shopping Operational Test. For Showcase #3, we will also have the capability to use the products under development for one or both of the other One Stop Operational Tests so long as they adhere to the CVISN Architecture. For Showcase #3, we may also have the capability to use other fleet management products if market demand results in their development.

3.2 Electronic Data Interchange (EDI) Standards

Objective

Participate in the definition of the draft ED1 standards needed to support the CVISN Prototype and subsequent related efforts.

Key Personnel

Rena Hussey, Jerry Fern. Judy Vesely, DMV; Glen Marier, RSIS; Ed Moses and Maggie VanVliet, APL

Target Date

Showcase #l: Efforts will focus on documentation for the Category I transaction sets:

- CV Safety & Credentials Information Exchange (TS285)
- CV Credentials Transaction Set (TS286)

For each Category I transaction set, the following documentation will be prepared:

- Business Case
- Transaction Set
- Implementation Guide

The priority for the credential types to be addressed in the TS286 will be consistent with general interest in the ITS/CVO user community, as follows:

1. International Registration Plan (IRP)/Registration Credentials
2. Single State Registration System (SSRS)/Operating Authority Credentials
3. International Fuel Tax Agreement (IFTA)/Fuel Tax Credentials
4. Hazardous Materials (HazMat) Permits
5. Oversize/Overweight (OS/OW) Permits
6. Federal Heavy Vehicle Use Tax (FHVUT) Credentials
7. CV Title
8. Commercial Driver's License (CDL)

These Category I Transaction Sets (TS285 / TS286) will support:

- Mainline screening and checks/inspections at roadside sites
- Data assembly and database maintenance
- Application, delivery, status, and state exchange of all credential information
- Screening of applicants for credentials
- Industry self-checks
- Interface with the Safety and Fitness Electronic Records (SAFER) System

Showcase #2:
Showcase #3:

Description

Dates/Showcases for the following are to be determined.
Preparation of documentation for the following Category II ED1 Transaction sets:

- Citation
- HazMat Information Request

- Complinace Review Report
- Accident Report
- International Border Crossing Data

Preparation of documentation for the following Category III EDI Transaction sets:

- Tax Filing
- HazMat Incident Response Data
- Financial Exchange
- Cargo Shipping and Routing
- International Border Crossing Data

3.3 Credentialing Interface (CI)

Objective

Demonstrate how electronic applications for credentials could be processed through a common interface using the appropriate ED1 standards. The CI will accept an ECI X12 transaction, translate the transaction into an acceptable legacy system format, accept responses from the legacy system and translate them into an ED1 X12 transaction to return via the mailbox to the carrier.

Key Personnel

Judy Vesely, Jerry Fern, Charlotte Ladd, DMV; Ken Jennings, VDOT: Ali Hooshman, RSIS: Maggie VanVliet, APL

Target Date

Showcase #l: Capable of accepting the following Virginia credentials electronically (i.e., electronically update VISTA/RS or VISTA/TS systems). Credentials to be mailed or faxed to applicant: IRP registration (original, renewal, and supplements), Virginia Motor Fuel Road Tax Registration (original, renewal, and supplements), IFTA registration (original, renewal, and supplements), Intra-State registration, and Oversize/Overweight permits.

Showcase #2: Capable of accepting and processing the following Virginia credentials electronically (i.e., electronically update VISTA/RS or VISTA/TS systems). Credentials to be mailed or faxed to applicant: IRP registration (original, renewal, and supplements), Virginia Motor Fuel Road Tax Registration (original, renewal, and supplements), IFTA registration (original, renewal, and supplements), Intra-State registration, and Oversize/Overweight permits.

Showcase #3: Capable of accepting and processing following Virginia credentials electronically and printing credentials at the applicant site: IRP registration (original, renewal, and supplements), Virginia Motor Fuel Road Tax Registration (original, renewal, and supplements), IFTA registration (original, renewal, and supplements), Intra-State registration, and Oversize/Overweight permits. Capable of electronic filing of road tax reports for Virginia carriers (IFTA and Virginia Motor Fuel Road Tax).

Description

The Credentialing Interface serves as the electronic entry point for motor carriers and related businesses to apply for and be granted the necessary credentials. Carriers will apply for credentials through either a carrier based CAT, a State Customer Service Center (CSC) or a commercial Service Bureau The CAT will provide one stop electronic submission of all applications required by the carrier. The Credentialing Interface will return an acknowledgment of receipt of the application and notification of required fee electronically. Upon payment of fees, the Credentialing Interface will provide credentials to the carrier electronically.

The submitted credential information will be received by the Credentialing Interface via Electronic Data Interchange (EDI) using an Xl2 standard. The Credentialing Interfacewill utilize existing or planned DMV computer facilities to receive applications and return acknowledgment of receipt, reroute applications for appropriate processing, and return credentials to the carrier. Routing of applications for processing will be to DMV, VDOT

and VISTA. Credential data will also be forwarded to Virginia's CV Information Exchange (CVIE) system.

The Credentialing Interface will interface with the Lockheed VISTA system via AAMVAnet.

The credentialing process upgrade by DMV is planned to be in three phases:

- Phase 1: Receive applications electronically. Return credentials by mail.
- Phase 2: Receive and process applications electronically. Return credentials by mail.
- Phase 3: Receive and process applications electronically. Return credentials electronically for printing at the CSC and carrier sites.

3.4 IRP Registration

Objective

Demonstrate the capability to electronic apply for, process, and issue original, renewal, and supplemental IRP credentials.

Key Personnel

Jerry Fern, DMV; Ah Hooshman, RSIS; Maggie VanVliet, APL

Target Date

Showcase #l: Electronic application of original, renewal, and supplements with actual credentials to be mailed or faxed to applicant.

Showcase #2: Electronic acceptance of application from Credentialing Interface and electronic processing using appropriate state system with actual credentials to be mailed or faxed to applicant.

Showcase #3: Add capability to print credentials at applicant's site.

Description

to be determined

3.5 Intrastate Vehicle Registration

Objective

Demonstrate the capability to electronic **apply** for, process, and issue vehicle registrations for intrastate vehicles.

Key Personnel

Jerry Fern, Rena Hussey, Judy Peterson, DMV; Maggie VanVliet, APL

Target Date

Showcase #1: Electronic application **with actual credentials to be mailed or** faxed to applicant.

Showcase #2: Electronic acceptance of application from Credentialing Interface and electronic processing using appropriate state system with actual credentials to be mailed or faxed to applicant.

Showcase #3: Add capability to print credentials at applicant's site.

Description

to be determined

3.6 Trip Permits

Objective

Demonstrate the capability to electronic apply for, process, and issue IRP and Virginia Motor Fuel Road Tax trip permits.

Key Personnel

Jerry Fern, DMV; Maggie VanVliet, APL

Target Date

Showcase #l: Electronic application for IRP trip permits **and** Virginia Motor Fuel Road Tax permits with actual credentials to be mailed or faxed to applicant.

Showcase #2:

Showcase #3: Add capability to print credentials at applicant's site.

Description

to be determined

3.7 Oversize/Overweight Hauling Permits

Objective

Demonstrate the capability to electronic apply for, process, and issue oversize and overweight hauling permits.

Key Personnel

Jerry Fern, DMV, Ken Jennings, CT Wicker, William Childress, VDOT; Maggie VanVliet, APL

Target Date

Showcase #l: Electronic application with actual credentials to be mailed or faxed to applicant.

Showcase #2: Electronic acceptance of application from Credentialing Interface and electronic processing using appropriate state system with actual credentials to be mailed or faxed to applicant.

Showcase #3: Add capability to print credentials at applicant's site.

Description

to be determined

3.8 IFTA Registration

Objective

Demonstrate the capability to electronic apply for, process, and issue original, renewal, and supplemental IFTA credentials.

Key Personnel

Rena Hussey, Jerry Fern, DMV; Ali Hooshman and Jeff Braud, RSIS; Maggie VanVliet, APL

Target Date

Showcase #l: Electronic application of original, renewal, and supplements with actual credentials to be mailed or faxed to applicant.

Showcase #2: Electronic acceptance of application from Credentialing Interface and electronic processing using appropriate state system with actual credentials to be mailed or faxed to applicant.

Showcase #3: Add capability to print credentials at applicant's site.

Description

to be determined

3.9 Motor Fuel Road Tax Registration

Objective

Demonstrate the capability to electronic apply for, process, and issue original, renewal, and supplemental Virginia Motor Fuel Road Tax credentials.

Key Personnel

Rena Hussey, Jerry Fern, DMV; Ali Hooshman and Jeff Braud, RSIS; Maggie VanVliet, APL

Target Date

Showcase #1: Electronic application of original, renewal, and supplements with actual credentials to be mailed or faxed to applicant.

Showcase #2: Electronic acceptance of application from Credentialing Interface and electronic processing using appropriate state system with actual credentials to **be** mailed or faxed to applicant.

Showcase #3: Add capability to print credentials at applicant's site.

Description

to be determined

3.10 IFTA Tax Filings

Objective

Demonstrate the capability to electronically file quarterly IFTA reports.

Key Personnel

Rena Hussey, Jerry Fern, DMV; Ali Hooshman and Jeff Braud, RSIS; Maggie VanVliet, APL

Target Date

Showcase #l: (no capability planned for this showcase)

Showcase #2: Electronic filing of road tax reports for Virginia carriers

Showcase #3:

Description

to be determined

3.11 Motor Fuel Road Tax Filings

Objective

Demonstrate the capability to electronically file quarterly Virginia Motor Fuel Road Tax reports.

Key Personnel

Rena Hussey, Jerry Fern, DMV; Ali Hooshman and Jeff Braud, RSIS; Maggie VanVliet, APL

Target Date

Showcase #l: (no capability planned for this showcase)

Showcase #2: Electronic filing of road tax reports for Virginia carriers

Showcase #3:

Description

to be determined

3.12 Liquidated Damages

Objective

Demonstrate the capability to electronically complete and enter liquidated damages citations from the roadside.

Key Personnel

Rena Hussey, Jerry Fern, DMV; Ken Jennings, CT Wicker, VDOT; Ali Hooshman, RSIS; Maggie VanVliet, APL

Target Date

Showcase #I: Electronically entering overweight citations from Virginia fixed sites to the DMV mainframe system.

Showcase #2:

Showcase #3:

Description

to be determined

4. CLEARINGHOUSES

4.1 IRP Clearinghouse

Objective

to be determined

Key Personnel

Jerry Fern, Rena Hussey, DMV; Ali Hooshman, RSIS; Maggie VanVliet, APL

Target Date

Showcase #l: .

Showcase #2: Basic capability to connect to appropriate Maryland and Virginia systems

Showcase #3:

Description

to be determined

4.2 IFTA Clearinghouse

Objective

to be determined

Key Personnel

Jerry Fern, Rena Hussey, DMV; Ali Hooshman and Jeff Braud, RSIS; Maggie VanVliet, APL

Target Date

Showcase #l: (no capability planned for this showcase)

Showcase #2: (no capability planned for this showcase)

Showcase #3: Basic capability to connect to appropriate Maryland and Virginia systems.

Description

to be determined

5. ELECTRONIC CLEARANCE

5.1 Roving Verification Van

Objective

Demonstrate the capability to implement electronic screening at a mobile site using the JHU/APL Roving Verification (ROVER) Van initially, and then the Virginia "ROVER" van with its full complement of equipment and software.

Key Personnel

Ken Jennings, Virginia Department of Transportation; CT Wicker, Virginia Department of Transportation; Lt. Herb Bridges, Virginia Department of State Police; Karen Smith, APL

Target Capabilities for Showcases

Showcase #l: Screening using information provided by the Commercial Vehicle Information Exchange using a license plate reader, transponder reader, and portable WIM. APL's ROVER will be co-located but not integrated with an existing weigh station facility (Stephens City). The portable WIM will be used at a mobile site (Bypass route 522). Inspection selection using ISS. Support for electronic collection of inspection information.

Showcase #2: Screening using information provided by the Commercial Vehicle Information Exchange (CVIE) using license plate readers, transponder readers, and integration with a portable WIM system at a site TBD. The Virginia "ROVER" system will be deployed for this showcase. Trend analysis data will be collected and reported at that site. Inspection selection using ISS. Support for electronic collection of inspection information.

Showcase #3: Screening at a remote location at mainline speeds using the Virginia "ROVER".

Description

ROVER offers an alternative for safety enforcement activities that combines the advantages of mobile enforcement (the ability to quickly set up a check point where violations are occurring) along with the advantages of a fixed facility (equipment needed to screen traffic so that officers focus on the high risk operators). Initially, ROVER will be operated at an existing facility to take advantage of the test environment these sites offer. However, ROVER's real long term benefit will be realized when it is used on Bypass routes.

5.2 Fixed Site

Objective

Demonstrate the capability to implement electronic screening at a fixed site (Stephens City and *other TBD).*

Key Personnel

Ken Jennings, Virginia Department of Transportation; CT Wicker, Virginia Department of Transportation; Lt. Herb Bridges, Virginia Department of State Police; Karen Smith, APL

Target Capabilities for Showcases

Showcase #1: (no capability planned)

Showcase #2: (no capability planned)

Showcase #3: Screening integrated with an existing weigh station facility (Stephens City and *other* TBD) using license plate readers and transponder readers, integration with sorter lane WIM/AVC, and using information provided by the Commercial Vehicle Information Exchange. Inspection selection using ISS. Support for electronic collection of inspection information.

Description

This activity will explore how to integrate the screening concepts into **an** existing fixed facility. Facilities both with (Stephens City) and without (site TBD) WIM were selected to demonstrate both possibilities.

5.3 Roving Crew

Objective

Demonstrate the capability for roving crews to use elements of the electronic screening concepts.

Key Personnel

Ken Jennings, Virginia Department of Transportation; CT Wicker, Virginia Department of Transportation; Lt. Herb Bridges, Virginia Department of State Police; Karen Smith, APL

Target Capabilities for Showcases

Showcase #l: (no capability planned)

Showcase #2: (no capability planned)

Showcase #3: Screening from a moving or stationary patrol car using license plate readers and transponder readers and using information provided by the Commercial Vehicle Information Exchange. Inspection selection using ISS. Support for electronic collection of inspection information.

Description

This activity will explore the possibility of using some of the capabilities used in the Roving Verification Van in patrol cars,

Roles and Responsibilities

(THIS SECTION WILL BE CONVERTED TO A MATRIX)

This section provides a cross-reference of the key personnel in each agency and their project activities.

1. VIRGINIA

Virginia Department of Transportation

- Jim (JB) Robinson
- Ken Jennings
- Jim (JR) Robinson
- Henry Shiley
- Rick Creery
- CT Wicker
-

Virginia Department of Motor Vehicles

- Ab Quillian
- Nancy Daugherty
- Kim Farrar
- Jerry Fern
- Julian Fitzgerald
- Lynn Gilman
- Grene Greenwood
- Charlotte Ladd
- Rena Hussey
- Judy Vesely

Virginia Department of State Police

- Lt. Herb Bridges
- Tpn. Tom Mears

- Ray Potter

Virginia Trucking Association

- Dale Bennett

Virginia Bus Association

2. FEDERAL HIGHWAY ADMINISTRATION

FHWA Turner Fairbanks Research Center

- Mike Curtis

FHWA Office of Motor Carriers Headquarters

- Doug McKelvey
- Larry Swartzlander

FHWA OMC Region 3

- John Steinhoff
- Bob Ketenheim
- Bob Miller
- Bob Neal

FHWA Federal Aid - Virginia

- Carl Modine

3. TECHNICAL SUPPORT

AAMVAnet, Incorporated

- Charlie Katz
- Carlos Dequina

IRP, Incorporated

- Stan Kelly

Johns Hopkins University/Applied Physics Laboratory

- Kim Richeson
- Tim Herder
- John Baker
- Val Barnes
- Carolyn Baxter
- Brenda Clyde
- Karen Goldee
- Sherley Lee
- Alan Mick
- Ed Moses
- Paul North
- Karen Smith
- Janet Spedden
- Maggie VanVliet
- DJ Waddell
- Ray Yuan

Lockheed-Martin Information Management Systems

RS Information Systems

- Scott Amey
- Chuck Minehan
- Bruce Cargill
- Jeff Braud
- Olga Burdeynaya
- Ali Hooshman
- Glen Marier
- Jude Nagurney
- Theresa Nester

Appendices

APPENDIX A. GLOSSARY OF TERMS AND ACRONYMS

AAMVA	American Association of Motor Vehicle Administrators
AAMVAne t	AAMVA network
ATA	American Trucking Association
AVI	Automatic Vehicle Identification
CDLIS	Commercial Driver's License Information System
COVERS	Commercial Vehicle Registration System
CVED	Commercial Vehicle Enforcement Division (MD)
CVISN	Commercial Vehicle Information Systems and Networks
DIT	Department of Information Technology
DSRC	Dedicated Short Range Communications
ED1	Electronic Data Exchange
EDIFACT	Electronic Data Interchange for Administration, Commerce and Transport
GVWR	Gross Vehicle Weight Rating
HELP	Heavy-vehicle Electronic License Plate
IEN	Information Exchange Network
IFTA	International Fuel Tax Agreement
ISS	Inspection Selection System
ITSA	Intelligent Transportation Society of America
MCMIS	Motor Carrier Management Information System
MCSAP	Motor Carrier Safety Assistance Program
NLETS	National Law Enforcement Telecommunications System
NMVTIS	National Motor Vehicle Title Information System
REVS	Roadside Electronic Verification System
SAFER	Safety and Fitness Electronic Records System
SAFETY-NET	
VAN	Value Added Net
VISTA	Vehicle Information System for Tax Apportionment
VTA	Virginia Trucking Association

APPENDIX B. LETTERS AND AGREEMENTS

US Department
of Transportation
Federal Highway
Administration

400 Seventh St.. S.W.
Washington D.C. 20590

February 2. 1996

Refer to: HSA-20

The Honorable Robert E. Martinez
Secretary of Transportation
Room 414
1401 East Broad Street
Richmond, Virginia 23219

Dear Secretary Martinez:

The purpose of this letter is to invite Virginia to partner with the Federal Highway Administration (FHWA) and become a Commercial Vehicle Information Systems and Networks (CVISN) Prototype State. The FHWA is planning to showcase Intelligent Transportation Systems/Commercial Vehicle Operations (ITS/CVO) technology in a CVISN Prototype project. It is our intent to form a partnership with two States (Maryland and Virginia) to test the technical feasibility of CVISN in a prototype implementation. The scope of the CVISN Prototype includes:

* distribution of safety information to computers at the roadside
* electronic collection of inspection data from the roadside
* electronic application for credentials by carriers
* interfacing of State systems to the International Registration Plan (IRP) clearinghouse
* interfacing of State systems to the International Fuel Tax Agreement (IFTA) clearinghouse
* performing electronic clearance.

If the Prototype is successful, CVISN would then move to a Model Deployment stage in several States.

We believe that Virginia is a leader and is well qualified to become one of the two CVISN Prototype States. We appreciate the State's history of leading and partnering with FHWA, especially in ITS. The Virginia CVO Working Group has demonstrated a commitment to teamwork among the State agencies dealing with CVO and private sectors, particularly the Virginia Trucking Association. Inclusion of the private sector is extremely important to the success of any CVO initiative This Working Group has been active in the two Institutional Issues Consortia to which Virginia belongs. The recent establishment of a One-Stop Shopping operation within the Department of Motor Vehicles

shows Virginia's commitment to improved customer service. Also, Virginia's extensive experience with Weigh-in-Motion technology is well known throughout the nation. Further, the Department of State Police is serving as a pilot organization for developing the use of pen-based computing units for motor carrier inspections, an important component-of any CVO initiative, as well as participating in the 200 Motor Carrier Safety Assistance Program (MCSAP) sites authorized by Congress. In addition, the development of a tactical plan for deployment of CVO technology in conjunction with other ITS activities shows a willingness to apply technology in innovative ways to improve government and industry effectiveness and productivity.

Of particular interest is your strategic plan for transportation, "Virginia Connections,' that has several strategies related to CVO technologies and efficiencies. Among these are the One-Stop Shopping initiative, removal of unnecessary regulations, commitment to electronic clearance and the consolidation of data bases. Additionally, your interest in joining the Advantage CVO coalition makes your State ideally suited *to* tie the current Advantage states to those in the Northeast Corridor. Also, we believe the relative proximity of the Johns Hopkins University Applied Physics Laboratory (JHU/APL) and their work in the CVISN Prototype make Virginia an excellent choice as a CVISN Prototype State.

As a CVISN Prototype State, you are requested *to* respond to this letter with a Memorandum of Agreement (MOA) signed by the head of each State agency with relevant motor carrier functions- We believe that the single most important key to success in this endeavor is the commitment of the top-level executives of the State agencies that will be involved. To assure this commitment, we are requesting that Virginia submit *a* MOA that endorses the project objectives and scope outlined earlier. This would be followed by Federal funding and a more detailed agreement.

Once the MOA is received, the FHWA can begin the process of transferring $500,000 toward the Virginia CVISN Prototype project. The next step in the project would be to jointly develop a detailed plan and agreement defining the roles, responsibilities and level of resources required of each participant. The FHWA has separately funded the JHU/APL to provide system architecture and engineering support and RS Information Systems to provide software development support. We do not require any hard match of funds but encourage a soft match of in-kind services. Of critical importance, however, is the dedication of a project manager to both manage the project for Virginia and act as liaison between the agencies and the JHU/APL and RSIS contractors. This effort needs to be closely coordinated with the Virginia Connections project.

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In closing, we want to reinforce the FHWA'S commitment to the successful implementation of the CVISN Prototype. Our time frame to achieve an initial operating capability is short, approximately six to eight months. Therefore there is an urgent need to finalize the commitment of two States, establish funding and initiate the project. We would like to be abie to showcase two or more of the CVO services in August or September of this year. Please feel free to contact Doug McKelvey at (202)366-9246 or Christine Johnson at (202)366-9536 at your earliest convenience for additional discussion. We look forward to a productive and mutually beneficial project.

Sincerely yours,

Christine M. Johnson
Director, Intelligent Transportation Systems
Joint Program Office

Mr. George L. Reagle
Associate Administrator for
Motor Carriers

COMMONWEALTH *of* VIRGINIA

Office of the Governor

George Allen
Governor

Robert E. Martinez
Secretary of Transportation

March 8, 1996

Ms. Christine M. Johnson, Director
Intelligent Transportation ***Systems***
Joint Programs Office

Mr. George L. Reagle
Associate Administrator for Motor Carriers
Federal Highway Administration
400 seventh Street, S.W.
Washington, D.C. 20590

Dear Ms. Johnson and Mr. Reagle:

ln reply to your invitation of February 2, 1996, for Virginia to become a prototype state for the Commercial Vehicle Information Systems and Networks project, attached is a signed agreement between the Cabinet Secretaries and Agency Heads responsible for Commercial Vehicle Operations in Virginia.

We look forward to participating in this effort and will await your further instructions regarding the transfer of the $500,000 and development of a detailed plan and agreement.

Sincerely,

Robert E. Martinez

REM/cmg

Attachment

cc: The Honorable Jerry Kilgore
Col. M. Wayne Huggins
Mr. David R. Gehr
Mr. Richard D. Holcomb

Commonwealth of Virginia

Commercial Vehicle Information Systems and Network Project
State Prototype

Memorandum of Agreement

Background

Commercial Vehicle Information Systems and Network Project (CVISN)

Purpose: To develop a nationwide intelligent transportation system permitting the seamless movement of goods, services, and people.

To this end, the Federal Highway Administration will select two states, Virginia and Maryland, to serve as CVISN prototypes to showcase commercial vehicle operations intelligent transportation systems (CVO/ITS) technology.

Commonwealth of Virginia Prototype

Purpose: To use Virginia as one of the two prototype states to refine and field test selected CVO/ITS technologies and systems and the CVISN architecture.

This may include the distribution of safety information to computers at the roadside, collection of inspection data from the roadside electronically, electronic filing for credentials by carriers and electronic clearance of vehicles at weigh stations.

Assistance to Be Provided by FHWA

FHWA will provide a $500,000 grant and technical assistance initially to expedite the implementation of on-going CVO/ITS initiatives in Virginia by assisting with: systems and software design and development, equipment procurement and deployment; field testing; and cost-benefit monitoring and evaluation.

Successful completion of the prototype will be followed by a Pilot State Project, in which the number of states involved will be increased from two to six or eight. Additional assistance will be provided by FHWA to support the Pilot State Project.

Prototype Project: Scope of Agreement

We, **the** undersigned, hereby agree on behalf of the Commonwealth of Virginia to participate in the Federal Highway Administration's Commercial Vehicle Information System and Network (CVISN) initiative **as** a **Prototype State.**

It is our understanding that within the next eight months, the Commonwealth of Virginia will deploy and field test applications of Commercial Vehicle Operations Intelligent Transportation Systems technology and the CVISN architecture in conjunction and cooperation with FHWA and the other prototype state, Maryland.

It is our further understanding the Federal Highway Administration shall supply a grant of $500,000 as will as necessary technical assistance to the Commonwealth of Virginia to assist with the development and implementation of the Prototype

It is our further understanding that the Commonwealth of Virginia will be required to commit the necessary staff support needed to complete the Prototype, and that this support shall be provided primarily from among those staff currently involved with Virginia's motor carrier programs.

It is our further understanding that the inclusion of any motor carrier program activity under the Prototype shall require the consensus agreement between the heads of agencies responsible for motor carrier programs.

It is further understood that the prototype will consist at a minimum of the following motor carrier services or features though not full scale deployment of each:

- Distribution of safety information to computers at the roadside.
- Electronic collection of inspection data from the roadside.
- Electronic application for credentials by carriers.
- Interfacing of State systems of the International Registration Plan (IRP) clearinghouse.
- interfacing of State systems of the International Fuel Tax Agreement (IFTA) clearinghouse.
- Performing electronic clearance.

It is our further understanding that, at the end of the Prototype, expected within eight or nine months from the date of this document, the Pilot Test Phase of implementation will be implemented with Virginia assured of inclusion into that phase of testing.

It is our further understanding that the Virginia CVO Working Group will assume all responsibilities on behalf of the state for the Prototype and that the undersigned will provide policy guidance and oversight.

SIGNED, THIS 4th DAY OF MARCH, 1996

Robert E. Martínez
Secretary of Transportation

Secretary of' Public Safety

David R. Gehr
Commissioner, VDOT

M. Wayne Huggins
Superintendent, State Police

Richard D. Holcomb
Commissioner, DMV